Wind Energy Resource Zone Board
Overview of Board Activities

Presented to the
House Energy & Technology Committee
February 9, 2010
David Walters, Chair
Wind Energy Resource Zone Board

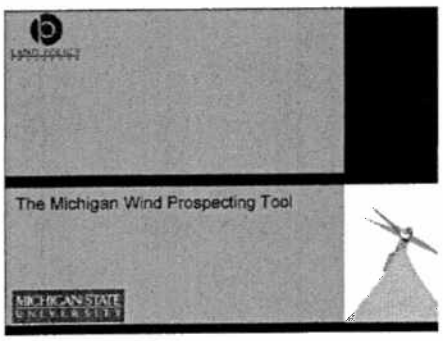
Background

- The Wind Energy Resource Zone Board was established by 2008 PA 295
- 11 board members were appointed by the MPSC with diverse professional backgrounds as required by Act 295
- Web Address: www.michigan.gov/windboard

Activities

- Board met 18 times from December 2008 through December 2009
- Identified 4 regions with the highest wind potential
- Issued Proposed Report on June 2, 2009
- Received comments from local governments and the public
- Held two public hearings in August 2009:
  - Bad Axe
  - Scottville
- Final Report Issued on October 15, 2009
- Reviewed transmission filings in December 2009
- Board dissolved in January 2010

Board Consultants

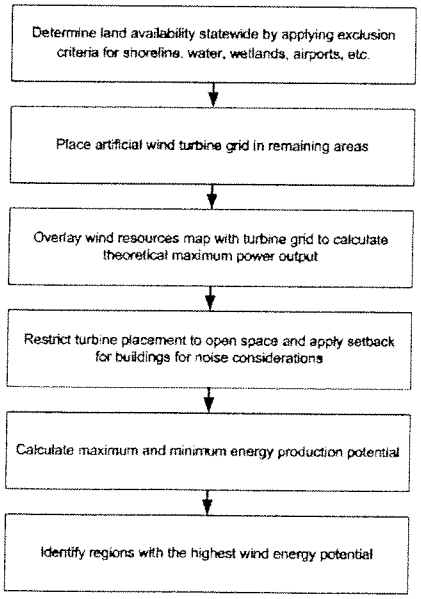


- Michigan State University – Land Policy Institute & Public Sector Consultants provided wind energy consulting and report writing services

WERZ Board Responsibilities

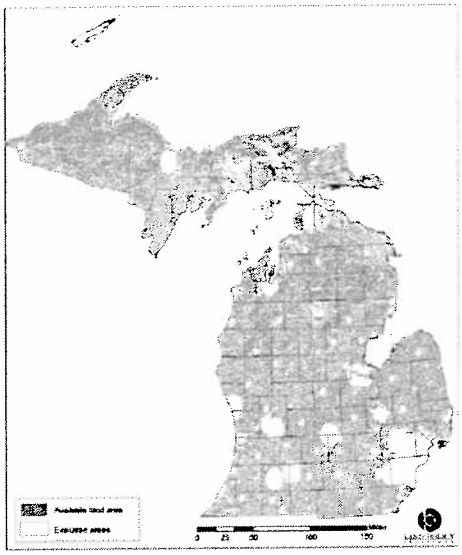
- Study wind energy production potential and land availability
- Develop a list of regions in the state with the highest level of wind energy potential
  - Estimate the max and min wind generating capacity and wind energy production potential for each region
  - Estimate of wind generating capacity already in service in each region

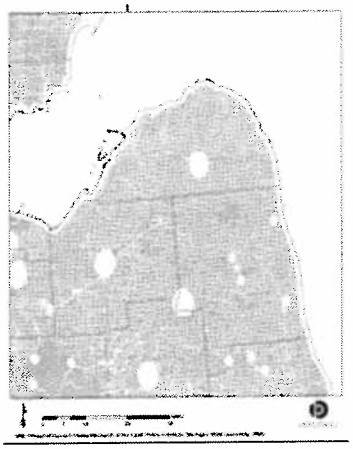
Methodology Overview



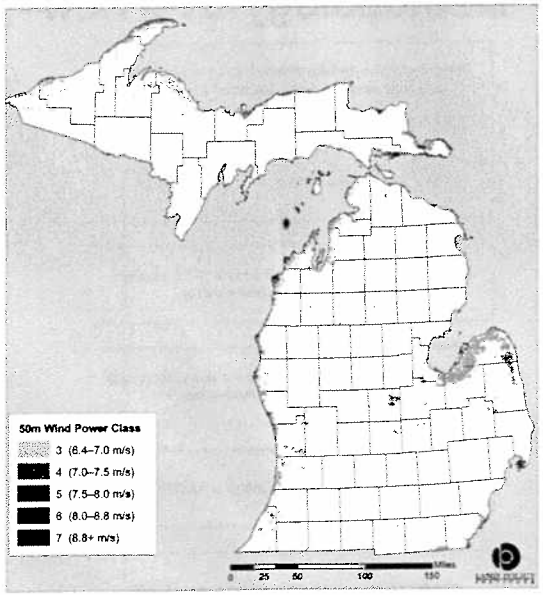
SOURCE: Public Sector Consultants Inc., 2009, using information from MSU Land Policy Institute, 2009, prepared for WERZ Board.

Land Area Available for Potential Use After Application of Exclusion Criteria





Class 3 or Higher Areas at 50 Meters



SOURCE: Map by MSU Land Policy Institute, 2009, prepared for WERZ Board, using data from AWS TrueWind and the U.S. DOE National Renewable Energy Laboratory (NREL).
NOTE: Legend uses wind power classification speeds specified by NREL.

Wind Regions Summary

		Minimum			Maximum		
Region	Counties	Number of turbines	Capacity (MW)	Annual energy potential (MWh)	Number of turbines	Capacity (MW)	Annual energy potential (MWh)
1	Allegan	166	249	747,938	296	445	1,338,415
2	Antrim Charlevoix	102	153	439,555	183	274	786,572
3	Benzie Leelanau Manistee	435	652	1,991,679	778	1,167	3,564,058
4	Huron Bay Saginaw Sanilac Tuscola	1,578	2,367	6,723,472	2,824	4,236	12,031,477
TOTAL		2,281	3,421	9,902,644	4,081	6,122	17,720,522

SOURCE: Research and findings from Michigan State University Land Policy Institute, 2009, prepared for WERZ Board.

Factors Impacting Wind Development

- The Board's wind analysis is a high level study that did not explicitly account for site-specific conditions and other important factors including:
  - Specific zoning and other local requirements governing the siting and construction of wind turbines and other infrastructure
  - New public policies that could fundamentally shift the demand for or cost of wind energy systems
  - Site-specific information and studies related to protected species; land use; parcel size; environmental, cultural, and historical factors; etc.
  - Expected community and public support for or opposition to wind energy development
  - Costs of any required distribution or transmission system improvements to connect the wind systems to the electric grid and deliver power to customers
  - Operational impacts associated with the integration of wind energy systems into the existing electrical system
  - Economic or technological factors that may affect the timing, location, and cost of development activities

Wind Region Selection Criteria

- Using wind speed data and turbine power output specifications, wind energy potential and capacity was calculated for each turbine
- The highest tier townships based on annual MWh and MWh/turbine became the building blocks for regions
- Turbines were not placed in cities, villages, and certain townships because of the application of the exclusion criteria.

Board Wind Regions

Contact Information

David Walters, Chair
Wind Energy Resource Zone Board

dwalters@mpower.org
(517) 323-8919 Ext 104
General Manager
Michigan Public Power Association

Michigan Public Service Commission

Report on the, Impact of Setback Requirements and Noise Limitations in Wind Zones in Michigan

Presented to the
House Energy & Technology Committee
February 9, 2010
Gary Kitts, Bureau Administrator
Michigan Public Service Commission Staff

Commission Order

- Designated Region 4 (Huron County and parts of Bay, Saginaw, Sanilac and Tuscola Counties) as Primary Wind Energy Resource Zone.
- Designated Region 1 (Allegan County) as Additional Wind Energy Resource Zone.
- Provided 21 days for affected parties to reach voluntary agreement on cost allocation methodology.

MPSC-Designated Wind Zones

Report Requirements

- Before preparing report, conduct public hearings in various areas of the state.
- Report on the effect that setback requirements and noise limitations under local zoning or other ordinances may have on wind energy development in wind energy resource zones.
- Recommendations for legislation.

Public Hearings

- Held on November 23, 2009 in Lansing, Bad Axe, and Traverse City.
- Comments received from 78 parties – 12 representing organizations (municipalities, utilities, wind farm developers, and law firm) and 66 representing public at large.

Estimates of Development Reduction Based on Setbacks

Region	Reduction @ 300 meters	Reduction @ 400 meters
Region 1	33%	59%
Region 2	26%	47%
Region 3	25%	47%
Region 4	34%	61%
Total for all Regions	32%	58%

SOURCE: Public Sector Consultants Inc., using data compiled and analyzed by Michigan State University Land Policy Institute, 2009.

Recommendations

- Decisions regarding appropriate setback distances and noise levels should remain under province of local planning and zoning authorities at this time.
- Expand role of Wind Working Group to include sponsoring periodic meetings to provide needed scientific information to decision-makers.

Contact Information

Gary Kitts, Bureau Administrator
Michigan Public Service Commission Staff

kittsg@michigan.gov
(517) 241-6193